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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,801	03/23/2004	Arthur V. Hawley	03-0194	2906

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EXAMINER	
SIRCUS, BRIAN	

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,801	HAWLEY, ARTHUR V.	
	Examiner	Art Unit	
	Brian Sircus	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Amason (2,982,494). Amason discloses a radome constructed of glass fibers and resin that is read on a composite body. Applied to the radome are strips of conductors placed longitudinally and additional strips extending across the longitudinal strips and connecting them forming a faraday method of shielding (column 2 lines 55-64). Since the strips are pasted directly to the surface this meets the limitation of on an exterior surface. They are placed in grooves however these grooves are on the exterior.

3. Claims 1, 2, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Schroeder (5,127,601). Schroeder discloses aircraft are made with skins made in whole of composites (carbon fiber and resin, see column 1 lines 16-31). To make the skin of the aircraft impervious to lightning strikes, Schroeder provides a thin metallic foil of aluminum with polygonal apertures bonded to the exterior surface of the composite airplane panels (see column 3, lines 49-62).

Regarding claim 2, a foil with polygonal apertures reads on the claimed limitation of conductive grids. Further, Schroeder stated that the entire aircraft may be made of composites, therefore the foil would be located over the entire aircraft, which reads on extending to its outermost lateral periphery.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3, 4, 7, 11, 12, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder in view of Andrivet et al. (6,327,132). Schroeder discloses a device and method of providing a shielding over the surface of a composite aircraft but does not disclose that composite aircraft have many panels of composite that must be joined electrically to one another. Andrivet discloses a structure with adjacent composite panels joined together by bolts and a connecting plate (see fig 3, column 4, lines 24-28). The panels have electrical shielding layers 5 that are electrically interconnected by bolts and the electrically conducting plate. This reads on the claim limitation of splice plates interconnecting the conductive grids.

Regarding claim 4, the bolts read on the conductive fasteners and the conducting plate 2 reads on the strap.

Regarding claims 7 and 15, Schroeder discloses carbon fibers form the composite materials. It is believe the claim meant to state carbon and not graphite fibers.

6. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder in view of Andrivet et al. as applied to claims 3 and 4 above and further in view of Prandy et al. (5,225,265). Schroeder and Andrivet disclose conductive panel and interconnect system for composite airplane panels but neither of these references

disclose the use of titanium as the splice plate metal. It is noted that Andrivet states the plates are metallic and may be aluminum (col. 4 line 24-25). Prandy teaches a number of metals useful for their high conductivity and corrosion resistance, one of which is titanium and another is aluminum. It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized titanium as the plate metal because Prandy teaches that these metals are interchangeable in aircraft lightning strike environments. In In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) it was held that selection of a known plastic to make a container of a type made of plastic prior to the inventions was obvious. Therefore since Titanium is known as an equivalent metal for aluminum in this environment it would have been obvious to one of ordinary skill in the art at the time of the invention to have to use titanium for its superior material properties, strength, weight, and electric potential when compared with aluminum.

7. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder in view of Sankrithi et al. (6,666,406). Schroeder discloses a device and method of providing a shielding over the surface of a composite aircraft but does not disclose that the aircraft is a blended wing body type aircraft. Sankrithi discloses a blended wing aircraft is made of composite materials (column 3, lines 12-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used the shielding of Schroeder in blended wing aircraft because Sankrithi teaches these aircraft have composite panels and Schroeder teaches such panels need protection.

8. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder in view of Paine (4,609,904). Schroeder discloses a device and method of providing a shielding over the surface of a composite aircraft but does not disclose the body/frame is used a return line. Paine discloses a vehicle that uses the chassis as the common return (column 1, lines 24-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Schroeder to use the aircraft chassis/skin as the return line because Paine teaches that this reduces the wiring necessary which in turn saves costs.

Any inquiry concerning this communication should be directed to Brian Sircus at telephone number 571 272 2058.

Brian Sircus
SPE
Art Unit 2836